



# TURN IN CONDITION AND REPAIR STANDARDS

January 2007 EDITION - FOR OUR CUSTOMERS

## GENERAL NOTES

- This document represents many common repairs and issues, but is not meant to be a complete or exhaustive list of all possibilities. Situations not specifically covered may be addressed to GE's Corporate Maintenance Department in Wayne, PA.
- Age guidelines are based on date of title (same as equipment sale). Unless specifically noted we do not treat "new" equipment any differently than "old" equipment. *(The ONLY exception to this rule is when a new unit is being delivered from the factory for a specific LTL account. Here the customer is expecting a brand new trailer, and so repairs should be made to return the unit to "brand new condition". Patches and sections may not be permitted.)*
- These standards apply specifically to GE units intended for ELTO (Equipment Leased To Others) use. Unless specifically noted in a contract, they do not apply to PFR (Purchase For Resale), SRB (Sale Rent Back) or other units intended for Resale.
- If expressly permitted by GE, units may be maintained to the customer's specifications until time of turn in. For example, our standard may call for replacing a temporary patch, but if the customer specifically requests, this work may be deferred until unit turn in. At time of turn in, repairs must be made to the standards described in this document. In no way and at no time may safety or DOT compliance items be deferred in this manner. GE reserves the right to inspect units on rent or lease at any time and repair customer damages at customer expense.
- If requested and paid for by the customer, repairs that will improve the cosmetic value of the trailer are authorized. For example, if the customer would rather replace a panel instead of sectioning it, and is willing to pay the cost difference, such repair is perfectly acceptable. Customers are not permitted to modify trailers without express written consent from GE's Corporate Maintenance Department in Wayne, PA.

- Some trailer components wear out in the course of regular usage. Replacement of these items as a result of this normal usage is called normal wear and tear. Examples include tire tread wear, brake lining wear, door seal wear, gradual plywood deterioration, etc. Each section below describes this normal wear and tear in specific detail.

- Many repairs made to trailers are a result of impact damage or other product misuse. When the customer is responsible for this damage, it is defined as customer damage, and the expectation is that GE will recoup the costs associated with this damage from the customer. Examples include patches, rail sections, holes, broken plywood, blown tires, flat spotting of tires, etc. Each section below describes what customer damage is in more specific detail.
- The repair standards in this document will on occasion require GE to make more extensive repairs than would be required to repair the most recent damage. An example would be having to replace or section a roof instead of installing a ninth patch. In these instances, the customer will be responsible only for the cost of repairing damages incurred while the unit was on rent or lease to that customer.
- Repairs that have been made by the customer while the unit was on rent or lease that do not meet the standards of this document will need to be reworked. The cost of this rework will also be considered customer damage unless noted differently in a contract.
- Lastly, sometimes a unit is inadequately maintained while on lease or rent, or it is used in an environment or application for which it is not suited; and excessive damage or wear results. Examples of this include, but are not limited to, having a unit on rent/lease and failing to check wheel end lube level resulting in an axle "burn up", poor braking techniques or only using trailer brakes for slowing a unit on a long downhill run resulting in a brake "burn up", parking trailers in a scrap metal yard resulting in multiple flat tires, severe overloading resulting in permanent crossmember deformation or trailer collapse, constantly carrying water soaked goods in the trailer resulting in floor and liner damage, or carrying freight such as scrap metal in a standard van, resulting in excessive sidewall and liner damage. Costs associated with these situations are also considered customer damage, and will be charged to the customer.

## SECTION 1.A: ACCESSORIES AND EQUIPMENT. Converter Dolly

- The 5th wheel plate shall have no signs of deformation or gouging and the jaws must lock with no free-play beyond manufacturer's specifications.
- Because of the critical location of this repair, there shall be no evidence of repairs below industry standards on the drawbar eye.

- Examples of normal wear and tear include gradual thinning of the drawbar eye not including distinct areas of impact damage.

- Examples of customer damage include improper repairs and external damages caused by things such as forklifts, improperly secured freight, trees, posts, docks, or other obstructions. An additional example would be irregular wear to one spot of the eye caused by poorly aligned trailers or improper hook up.

## SECTION 1.B: ACCESSORIES AND EQUIPMENT. *Liftgate*

- No overlay plating of platform is permitted.
- No heat straightening of platform is permitted.
- No welded cracks or cuts to platform are permitted.
- Do not straighten rails unless up/down operation is affected. Cold straighten only.
- When replacing a deck chain, both chains should be replaced if deck is uneven after one chain is replaced or if the chain has obvious customer damage.

- Examples of normal wear and tear include gradual thinning of the deck plate, not including distinct areas of impact damage. Other examples include minor dents or scrapes on deck plate or rails that do not hamper operation.

- Examples of customer damage include but are not limited to improper repairs, holes or cracks in deck plate caused by impact, bent or cut posts, or other internal or external damages.

## SECTION 2.A: BODY (BOX). DRY VAN EXTERIOR. *Panels / Post and Panel Trailers*

- Unless otherwise noted, nose and corner panels should be treated the same as side panels.
- Do not section or weld on extruded post-type corner panels.
- Sectioning of posts is limited to no more than 2 consecutive posts and a maximum of 6 posts per side and no section greater than 24" in height.
- Posts need to be replaced if: cut or cracked more than 1", crushed to less than 1/2 its original depth, exterior damage cuts through both riveting flanges, or permanently deformed or bowed more than 1" as measured with a straight edge from top rail to bottom rail. (Note: Plate trailer sides are allowed more permanent bowing than post & panel trailer sides - see Section 2.C.)
- All sections must run the width of the original panel and must be fastened with buck rivets.
- Do not install more than a total of 6 sections or patches per trailer side. Do not section more than 2 consecutive panels.

### **Patching**

- Rivets installed into posts, rails or other structural members must be solid buck rivets with the hardness rating equal to the original rivets used by the manufacturer.
- Do not replace a pop-rivet patch that appears to be improper but does not show any signs of leaking.
- All patches must be sealed with panel tape or silicone.
- Do not install more than 2 patches on a single panel.
- "Strip patches" must be at least 4" wide or tall.
- Do not install a patch larger than 4 sq. ft.
- 1" diameter or smaller holes in side panels (such as those left by placard fasteners) may be closed with a sealant and/or rivet and do not require patching.
- Vanfastic or Vantastic patches may be used for patching flat surfaces for holes less than 6"X6" with the edge of the patch a minimum of 1" from any rivet line.

### **Patching (cont)**

- Rivet spacing should follow these guidelines: Vertically – rivets should be installed in the existing hole pattern. Horizontally – Rivets should be spaced to match the rail rivet line or be spaced 2" apart
- No patches should overlay an original panel or rail seam.
- Do not replace a buck rivet patch that does not show signs of leaking, but is improper only because of rivet spacing or patch size.
- Patches must be the same color as the panel.

### **For units 8 years and older**

- Unless specifically stated otherwise, all above rules apply.
- Up to 4 patches per panel are permitted.
- Panels may be sectioned up to half their height. All sections on the same side of a trailer should be the same height.
- Do not replace a pop-rivet patch that appears to be improper but does not show any signs of leaking.

- There are no examples of normal wear and tear on panels or posts.

- Examples of customer damage include improper repairs, holes or cracks in panels caused by internal or external impact, bent or cut posts, or other internal or external damages caused by things such as forklifts, improperly secured freight, trees, posts, docks, or other obstructions

## SECTION 2.B: BODY (BOX). DRY VAN INTERIOR. *Post and Panel Trailers*

### **Interior Lining**

- Section or replace plyliner if: damaged enough to catch freight, damage exposes a post, or damage creates a hole with a dimension longer than 6"
- Do not replace scuff boards or plates unless cracked or a hazard to freight, exposes a post, or damage creates a hole with a dimension longer than 6"
- Do not section steel, plywood, or 1/4" fiberglass or hard plastic scuff. Replace the entire side or panel.
- 1/2" soft plastic (recycled plastic) and oak scuff may be sectioned.
- When installing ¾ composite scuff liner, plyliners must extend to the floor.
- Wood putty may be used to repair damage to plyliner with holes smaller than 6". Wood putty may not be used to repair damage that would call for plyliner or scuff replacement.
- Plyliner may be sectioned if E-track is present.

- Examples of normal wear and tear include gradual thinning, minor splintering, and discoloring of plyliner and scuff not including distinct areas of impact damage. Other examples include minor dents or scrapes on steel or plastic scuff that do not call for scuff replacement. Refastening of loose scuff or plyliner is also normal wear and tear.

- Examples of customer damage include but are not limited to plyliner or scuff include holes that are not the result of gradual plywood deterioration or wood that is cracked as a result of impact damage. Plastic or steel scuff torn badly enough warrants replacement.

## SECTION 2.C: BODY (BOX). *Plate Trailers*

- Punctures 6" x 6" or less maybe patched. Aluminum smooth side panel material or vantastic may be used for these small patches. Patches must not connect to a post or rail. If either criteria is not met, then section or replace the panel.
- Do not install a patch with a dimension larger than 12".
- A cut ¼" x 18" or less in the plate panel at any location can be welded. Both sides of the cut must be welded & the interior weld must be smooth.
- If a cut is through a post and over 18" long, the panel should be sectioned and the post replaced. Sectioned panels must be full width and up to ½ its vertical height with reinforcement plate at the seam.
- Minimum panel section height must be at least 14" from the floor line.
- Replace or section side panels if bowed more than 3". Measure when the trailer is empty using a straight edge from top rail to bottom rail inside the trailer. Any 2 points on a single panel at least 12" apart from each other that are 3" from the straight edge call for the panel to be repaired.
- Repair side panels if gouged or creased more than 3/4". Measure using a straight edge 12" long lay flat and vertical against the side panel. Any 2 points on a continuous gouge that are at least 12" apart that are both 3/4" from the straight edge call for the panel to be repaired.
- Replace exterior posts if damaged inside of the rivet line or if damage exposes or connects 4 adjacent rivets. Other minor damages may be welded or sealed.
- Replace posts for bowing or permanent deformation using the same criteria as for panels, except that posts require only 1 point out of spec rather than 2.
- Do not section radius/starter post.
- No limitation to the number of panels that maybe section but only 1 section per panel

• Examples of normal wear and tear include dents and scrapes that do not call for panel or post replacement or repair. Side panels are not wear out components.

• Examples of customer damage include sheared rivets, improper repairs, holes, dents, gouges, or panel deformation that calls for panel or post replacement or repair.

## SECTION 2.D: BODY (BOX). *Composite Body Trailers*

- Do not use a patch that is larger than 1' square.
- Do not install a patch within 6" of a seam or if damage penetrates both skins. Replace the entire panel.
- Panel sections may be performed but may not be done within 4ft of the trailer's centerline.
- Panels may be patched if the cut or crack penetrates only one skin and patch would be no larger than 1' square.
- Patches must leave the interior smooth.
- Do not install more than one patch per panel.
- Do not install patches on two consecutive panels.
- Patch material should match the color of the panel.
- Interior skin damage should follow the above rules.
- Replace side panels if bowed more than 3". Measure when the trailer is empty using a straight bar from top rail to bottom rail inside the trailer. Any 2 points on a single panel at least 12" apart from each other that are 3" from the vertical bar call for the panel to be replaced.
- Do not section rear header or nose rails. Replace only.
- Examples of normal wear and tear include dents and scrapes that do not call for panel replacement or repair. Side panels are not wear out components.
- Examples of customer damage include sheared rivets, improper repairs, holes, dents, gouges, missing D-Ring cups, or panel deformation that calls for panel replacement or repair.

## SECTION 2.E: BODY (BOX). *Rails*

- Get specific instructions from GE's Corporate Maintenance Department before reworking previous rail repairs.
  - Welding a crack or cut in a rail is acceptable if:
    - Damage or weld is not located within the middle no "splice zone" (4' from left/ right of center of trailer).
    - **Area Above Floor Line:** crack or cut is less than or equal to ¼" wide and 36" long. The finished weld is limited to 1" wide and 38" long. If the damage passes through a point where a post is secured only a bottom reinforcement plate is required- see back plate section below
    - **Area Below Floor Line:** crack or cut is less than or equal to ¼" wide and 14" long. The finished weld is 1" wide and 16" long require only lower reinforcement plate- see back plate section below.
    - No rail may have more than 3 repairs or more than 1 section
  - Replace any sheared or otherwise damaged rail rivets.
  - Do not repair the bottom outer lip on plate trailers where the side plates are directly bolted to the crossmembers.
  - Back plate minor rail damages instead of sectioning or replacing the rail. Minor damage is defined as damage that fits in a 2" tall and 12" long area. Back plates must be a minimum of a 50K psi yield strength steel and must be at least 1/8" x 4" x 36". Plates must span the end clips of at least 4 crossmembers, 2 on either side of the repair. If damage is at or above the floor line of the trailer, back plates must be installed both above and below the floor line. "Stop drill" the ends of any cracks before installing a back plate. Back plates, like splice plates, require at least 10 correct fasteners on either side of the repair. Back plates cannot be welded from crossmember to crossmember.
  - Do not repair dents in rails that do not produce a visible crack or hole; unless the dent deviates more than 1" & within 3" of the center of the crossmember and exceeds 5 consecutive crossmembers, then repair per guidelines in this section.
  - Section or replace rails with damage greater or longer than that specified for back plate repairs.
  - Plate over repairs are permitted on the lower portions of bottom rails only to reinforce cracks up to a maximum size of 2" tall and 12" long. The plate material's height must equal or exceed the crossmember height, the length and securement details are the same as backplate specifications and material be a minimum 3/16" thick 6061 aluminum
  - Punctures & cuts 4" or less maybe welded in a wrap-around Nose Rail. No repairs to corner caps, replace only.
- Sectioning**
- Top rail sections must be at least 4' long. The splice can not fall directly over the landing gear.
  - Bottom rail section must be at least 10' long; sections from the front must extend past the landing gear.
  - Splices are not permitted in the middle 8' of any trailer more than 39' long.
  - No rail may have more than 3 repairs or more than 1 section/splice. See Tech Aid Manual # 2.E-01 for permissible section combinations.
  - Sections must start at either the front or rear - no 3 piece rails.
  - Sections longer than 1/2 the length of the trailer are permitted.
  - Do not section rear header or nose rails. Replace only.

## SECTION 2.E: BODY (BOX). *Rails cont'd*

### **Electrolysis on rail and panel**

- Rails with minor pitting (pitting that can be removed by buffing) should be cleaned and reworked using anti-corrosion barrier
- Panels with electrolysis causing either the fasteners to fall off or the panel to deteriorate to the point that it is no longer fully attached must be sectioned or replaced as detailed in section 2A Body/Exterior Panels. The affected area must be fully cleaned and anti-corrosion barrier installed
- Rails where electrolysis has created a crack, or a visible hole must be sectioned or replaced as detailed in section 2.E: The affected area of the cross members must be fully cleaned and new anti-corrosion barrier installed. Inspect 2 crossmembers past affected area.

### **For units 8 years and older**

- Rails where electrolysis has created a crack, a visible hole, or caused rivets to fall off can be cleaned (buffed) and back plated as detailed in section 2E Body/Rails. Mylar tape must be used.
- Panels with electrolysis causing either fasteners to fall off or the panel to deteriorate to the point that it is no longer fully attached can be cleaned and sectioned with no limits to the size of the section or how many panels can be sectioned in a row.

- There are no examples of normal wear and tear to rails. Rails are not wear out components.

- Examples of customer damage include but are not limited to improper repairs, including all welding on rails, or inappropriate use of plate repairs, cracks, rips, bends, or breakage due to exterior or interior impact. Permanent bending or breakage due to trailer overloading or improper loading is also customer damage.

## SECTION 2.F: BODY (REEFER). *Interior / Exterior*

### **Exterior**

- Rails must follow the same guidelines as detailed in the rail section above.
- Panel patches and sections follow the same guidelines as detailed in the Exterior Panel section for Post and Panel trailers above other than the manner in which they are fastened.
- Panel replacements must meet original manufacture guidelines including buck rivet fasteners.
- If the insulation is damaged, prior to patching or sectioning a reefer panel you must first re-insulate the area by using spray insulation. After spraying the insulation it should be shaved to match the existing insulation.
- Patches and sections should be fastened utilizing stainless steel mono-bolts rather than buck rivets.

### **Interior**

- Interior aluminum scuff liner should follow the same guidelines as detailed in the Dry Van Interior section above. Scuff may be welded.
- Damaged insulation should be replaced with spray insulation prior to any repair. The re-applied insulation should be shaved to match the existing insulation.
- Holes or cuts smaller than 6" in diameter should be repaired utilizing sealant (Pliogrip).
- Holes or cuts larger than 6" in diameter should have the damage area cut in a rectangular shape. Replacement material matching the original material should then be cut to fit the area

- Examples of normal wear and tear to reefer Interior include gradual thinning, minor splintering, and discoloring of kemlite and scuff not including distinct areas of impact damage.

- There are no examples of normal wear and tear to reefer exteriors.

- Examples of customer damage to reefer interior include holes in kemlite or scuff that are the result of impact damage.
- Examples of customer damage for reefer exterior include improper repairs, holes or cracks in panels caused by internal or external impact, bent or cut posts, caused by things such as forklifts, improperly secured freight, trees, posts, docks, or other obstruction.

## SECTION 2.G: BODY (BOX). *Roof / Roof Bows*

- Replace any missing or cut roof bows.
- Repair or replace any roof/bow that is arched to extent that it has caused stress cracks or the distance between the top rails to be reduced to less than OEM specifications.
- Deflective or collapsed roof/bows caused by snow or ice damage must be repaired to restore OEM roof arch

### **Sections**

- Section or replace a roof with or needing more than 20 sq. ft. of patches per 10' section of length (i.e. 2 - 2'x5' patches, etc.)
- Do not replace a roof that can be sectioned.
- Do not perform more than one section to a roof.
- Do not section a roof bow. (Replace only.)
- All sections must start at either the front or rear header.
- Replace pop-rivet or improper sections at unit turn in.
- Do not paint over or otherwise repair scrapes or scratches that do not puncture the exterior sheet.
- Trailers that have been stretched are considered to have a roof section.

### **Patching**

- Do not install more than 20 sq. ft. of patches in any 10' section.
- Do not install more than 10 patches in a roof.
- Do not install a patch larger than 16 sq. ft. (i.e. 4'x4', 3'x5'4", etc.)
- Do not install a patch with a dimension longer than 8'.
- Patches must be secure and show no signs of leaking.
- Do not install patch over a patch

## SECTION 2.G: BODY (BOX). *Roof / Roof Bows cont'd*

### **Fiberglass Roofs**

- Do not install a "chemical" or "wet" patch longer than 12".
- Fiberglass roofs may be repaired with buck rivet patches. If so, all other restrictions on patching apply. Any buck rivet patches installed on fiberglass roofs must have 1" wide edge strips on either side of the rivet lines.

### **For units 8 years and older**

- Unless specifically stated, all above rules apply.
- Do not replace a pop-rivet patch that appears to be improper but does not show any signs of leaking.
- There is no limit to the number of patches that may be installed, although the 16 sq. ft. patch size rule still applies.
- Sealed pop-rivet patches are acceptable.
- Vantastic or Vanfastic patches are acceptable, except Translucent roof

- There are no examples of normal wear and tear to roofs. Roofs are not wear out components.

- Examples of customer damage include improper repairs, holes or cracks caused by impact, loose roof bows caused by impact, bent or broken roof bows, or other internal or external damages caused by things such as forklifts, tree branches, low dock ceilings, low bridges, etc. These costs will be charged to the customer.

## SECTION 3.A: DOORS. *Insulated*

- Doors that will not seal or are not structurally sound must be replaced.
- Insulated swing door panels may be patched. (Outer skin only).
- Patch must not affect the integrity of the insulation.
- Damage that penetrates only the interior door panel skin and has no dimension longer than 4" may be repaired using sealant.
- Damage that penetrates both skins may be repaired using sealant only if the hole has no dimension longer than 1" and the insulation is not damaged.
- Gouges in plywood that are 6" or less may be repaired with wood putty before outer skin repair.
- Significant plywood delamination requires complete door replacement.
- All swing door panels must be the same color.
- All door panels must be the same color
- Roll Door panels may not be patched or sectioned. (Replace only.)
- For hinge, seals, and other door guidelines see sections 3.B and 3.C.
- Patch must not affect the integrity of the insulation.

- Examples of normal wear and tear include gradual deterioration of door seals (not including any damage to the aluminum portion of some door seals).

- Examples of customer damage include improper repairs, such as door patches, double corner sections, or welding other than hinge butts. Other examples include holes or cuts in panels due to exterior impact from trees, fences, docks, posts, or other obstructions or internal damage from forklifts or freight shifting. Impact damage to door hardware, holdbacks, or seals is also customer damage, including damage caused by improper door openings or closings or damage to doors, lock mechanisms, and keepers as a result of attempted theft or break-in. These costs will be charged to the customer.

## SECTION 3.B: DOORS. *Overhead*

- Do not weld on overhead door hinges or rollers.
- Do not patch or section overhead door panels.
- Damage that penetrates only the interior door panel skin and has no dimension longer than 4" may be repaired using sealant. Similarly, exterior damage with no dimension longer than 2" may also be sealed.
- Damage that penetrates both skins may be repaired using sealant only if the hole has no dimension longer than 1".
- All door panels must be the same color. (No gray - white mix.)
- If decals are present, follow instructions in section 5.A
- Corrosion and plywood rot are as described under **Swing Doors**.
- Do not repair rollers, hinges, cables, or pull strap - replace only.
- Hinge bolts may not extend more than the top of the securing nut inside trailer
- Do not replace door track unless cracked or it cannot be straightened to allow roller passage. Do not section door track. Replace in segments per original design.
- Replace hinges and rollers only if door movement is impeded.
- Replace cable if any wire strands are broken or frayed.
- Do not section bottom door seal - replace the entire seal.

- **For units 8 years and older**
- Riveted door patches are acceptable for storage units.

- Examples of normal wear and tear include fraying of door cables or pull straps, gradual deterioration of door seals, plywood core deterioration that is not the result of unrepaired or improperly repaired damage, and gradual wear of nylon rollers.

- Examples of customer damage include but are not limited to improper repairs, such as door patches or sections or welding on hinges or cut cables and straps. Damage to rollers, hinges, locks, door tracks or other hardware including damage caused by attempted theft or improper door openings are considered customer damage.

## SECTION 3.C: DOORS. *Swing*

- Replace a door that will not seal properly due to bowing or creasing.
- Do not perform vertical or horizontal door panel sections. Only corner sections up to 18" long on one side are permitted.
- Do not install more than 1 bottom and 1 top corner section per door panel or perform vertical or horizontal door panel sections. Only corner sections up to 18" long on one side are permitted. Corner sections must be made utilizing ¼" carriage bolts and should not extrude more than the head of the securing nut.
- Damage that penetrates only the interior door panel skin and has no dimension longer than 4" may be repaired using sealant. Similarly, exterior damage with no dimension longer than 2" may also be sealed.
- Damage that penetrates both skins may be repaired using sealant only if the hole has no dimension longer than 1"
- Superficial damage or corrosion to either interior or exterior door skins that exposes more than 2 sq. in. of the door core may be patched if the core is not rotted. The maximum size is limited to one foot high along any one side and only one additional patch is permitted to the center area of the door.
- Replace or section doors for corrosion if corrosion exposes more than 2 sq. in. of plywood core or if any portion of the exposed core is rotted.
- Corrosion that is only directly under hardware, such as hinges or lockrod keepers, may be plated over if the plywood core is not rotted.
- Do not repair aluminum door hinges - replace only. Steel hinges may be straightened but may not be welded.
- Both door panels must be the same color, acquisition units may be different.
- Do not weld cracked hinges or other hardware - replace only.

### Door seals

- Repair door molding/seal if damaged or missing or if the door does not seal well enough to prevent seeing light from inside the trailer with the doors closed.
- Do not section the top or bottom edges of door seals.
- Aluminum extrusion style seals may be sectioned.
- Side edges of door seals may be sectioned in 1" increments.
- Sealok door seals may be sectioned on the sides of the door in one-foot increments; top and bottom door edges of the door may not be sectioned.

- The symptoms below are indicators of plywood core rot. Panels exhibiting these characteristics are candidates for replacement, with a final decision based on unit age and overall condition. As a general rule, we should not change a door on a 7 or 8 year old unit unless it exhibits substantial signs of core decay.
  - ✓ You can push a flat tip screwdriver 1/2" into the core by hand.
  - ✓ The door skin shows signs of creasing or warping at the hinges.
  - ✓ Metal door skins visibly move when squeezing the panel by hand.
  - ✓ The door skin shows signs of creasing or warping at the hinges either at rest or when the door is shaken
  - ✓ The core has swollen so much that a door seal a maximum of 1/4" wider than the original seal cannot be installed over the panel.

### For units 8 years and older

- Riveted door patches are acceptable for storage units.
- Door panels may be different colors.

Examples of normal wear and tear include gradual deterioration of door seals (not including any damage to the aluminum portion of some door seals) or plywood core deterioration that is not the result of unrepaired or improperly repaired damage.

Examples of customer damage include improper repairs such as door patches, double top or bottom corner sections, or welding on door hardware other than hinge butts. Other examples include holes or cuts in panels due to exterior impact from trees, fences, docks, posts, or other obstructions or internal damage from forklifts or freight shifting. Similar impact damage to door hardware, holdbacks, or seals is also customer damage, including damage caused by improper door openings or closings or damage to doors, lock mechanisms, and keepers as a result of attempted theft or break-in.

## SECTION 4.A: FRAME & UNDERCARRIAGE. *Coupling Device*

- Replace Kingpins with gouges deeper than 1/4", that do not pass a wear gauge test, or that have 1/2" or more of the bottom flange broken off.
- The approach plate may show signs of minor dishing between crossmembers to a maximum of 1" if there are no signs of collapse, corrosion or detaching of welds.
- The coupler plate must be flat with no signs of gouging or twist.

There are no examples of normal wear and tear to the coupler assembly. Coupler assemblies are not wear out components.

Examples of customer damage include major dents, bending, and cuts caused by internal or external impact damage. A broken or chipped kingpin, especially the bottom flange of the pin, caused by improper backing under the trailer is also customer damage.

## SECTION 4.B: FRAME & UNDERCARRIAGE. *Crossmembers*

- Replace crossmembers over landing gear if crushed more than 1/2" in height.
- Replace bay area crossmembers if sagging more than 1/2" as measured with a straight edge from bottom rail to bottom rail.
- Sectioning crossmembers is limited to the slider rail area and a maximum of 3 per side and no more than one repair on any crossmember. All sections must be reinforced with a 1/8" x 12" steel plate
- Replace crossmembers if cracked, except as noted below.
- Do not repair bent crossmember flanges if they are not cracked.
- Crossmembers with minor web, flange, or clips torn less than 1" long may be repaired by welding or straightening to a maximum of 3 consecutive crossmembers

There are no examples of normal wear and tear to crossmembers. Crossmembers are not wear out components.

Examples of customer damage include but are not limited to improper repairs such as crossmember sections or flange welds, cracks or bends including damage caused by tire blowouts, or deformation or bowing of crossmembers caused by overloading.

### SECTION 4.C: FRAME & UNDERCARRIAGE. *Mudflap and Bracket*

- Mudflaps may be cut to proper length if needed.
- Do not replace non-GE plain black or OEM logo mudflaps.
- Replace customer logo or acquisition logo mudflaps.
- Mudflaps with holes less than 2sq.in or tears shorter than 3" that do not effect the attachment of the flap do not require repair.
- Painting over customer logo or acquisition logo mudflaps is allowed only with a black rubberized coating.

- There are no examples of normal wear and tear to mudflaps and brackets. These are not wear out components.

- Examples of customer damage include improper mudflaps, missing, torn, or partially torn off mudflaps and bent, cracked, or missing mudflap brackets. This includes damage caused by road hazards, or backing over items such as curbs, posts, or dock devices.

### SECTION 4.D: FRAME & UNDERCARRIAGE. *Wood Floor / Flatbed Floor*

- Minor cuts in the threshold plate may be welded.
- No "plate over" repairs on any units are acceptable. Replace any such repairs at time of Preventative Maintenance Inspection (PMI).
- Section or replace boards with gouges deeper than 1/2", wider than 1/2" and longer than 12". (Nail holes are not gouges.)
- Use a wood filler product for gouges in van trailers that don't warrant sectioning. Do not repair gouges in flatbed floors.
- Section or replace boards with any crack longer than 12".
- Do not replace a board that can be sectioned.
- Floorboard sections must span at least 5 crossmembers and so must be at least 4' long.
- Middle sections are permitted, but board may not have more than 2 splices (or 3 pieces).
- If sectioning more than 1 board, splice locations must be staggered so that splices on adjacent boards are at least 2' apart.
- Van floors displaying daylight or water leakage must be sectioned or replaced. Units older than 8 years with signs of minor delamination may be repaired with an approved floor epoxy.

#### **For units 8 years and older**

- "Plate over" floor repairs are acceptable for storage units.
- Sections must span at least 3 crossmembers.

- Examples of normal wear and tear include minor gouges and nail holes that do not require floor sectioning or board replacement. Simple threshold plate refastening is also considered normal wear and tear. Floors are not a wear out component.

- Examples of customer damage include improper repairs, such as "plate overs" or board sections that are too short. Other examples are large gouges or cracks caused by overloading or forklift scraping or damage to a threshold plate that would require plate replacement or substantial straightening. Water damage caused by unrepaired or improperly repaired sidewall or roof damage and damage caused by exposing the floor to acids or corrosive materials is also considered customer damage.

### SECTION 4.E: FRAME & UNDERCARRIAGE. *Aluminum Floor*

- Cracks up to 1/2" wide and 12" long may be repaired by welding or plating- flat floor only, corrugated floors can only be sectioned.
- Damage that exceeds the minor cracking conditions must have the floor sectioned

- Examples of normal wear and tear include minor dent or scrapes that do not puncture the floor. Floors are not wear out components.

- Examples of customer damage include improper repairs such as bolted plates or sections. Other examples include punctures, cracks or floor collapse due to overloading or forklift scraping.

### SECTION 4.F: FRAME & UNDERCARRIAGE. *Bumper*

- Check ICC bumper for DOT certification decal; if decal is not present, check for signs of customer damage or replacement.
- Replace ICC bumper if DOT certification decal is missing and bumper has obviously been replaced or damaged by customer.
- Other than cold straightening, do not repair ICC bumpers on 1998 and newer units. Replace assembly with a DOT certified replacement.
- ICC bumpers must be replaced in accordance with the manufacturer's directions.
- Do not repair bumper if bent less than 3" out of shape.
- Straighten bumpers that are bent more than 3" out of shape.
- Use only DOT certified and labeled square tube for horizontal bar replacements.
- Do not repaint a rusted bumper that does not require other repair on a unit more than 5 years old without approval from GE's Corporate Maintenance Department.

#### **For units 8 years and older**

- Do not replace worn or missing dock bumpers unless asked to do so by a customer.

- Examples of normal wear and tear include minor dents and scrapes to the bumper assembly that do not require straightening or other repair.

- Examples of customer damage include improper repairs such as uncertified repair of 1998 and newer bumper assemblies or repairs that do not meet regulatory requirements or requirements as noted above.

## SECTION 4.G: FRAME & UNDERCARRIAGE. *Landing Gear*

- Do not replace sand shoe unless in danger of falling off or collapse.
- Replace sand shoes that are mismatched and cause trailer to sit unevenly.
- Replace landing gear handle if bent, cracked, rusted so as to potentially cut someone's hand, or will not fit into retainer.
- Repair or replace legs or entire assemblies that are bent more than 1" from their original position as measured at the bottom of the shoe.
- Do not rebuild landing legs. Replace only. Gearboxes may be rebuilt, but not the lower leg.
- Do not repair cross shaft. Replace only.
- Kinked outer legs, cross braces, wing plates and brackets may not be sectioned- replace only. Minor cuts or cracks may be welded.
- Only fasteners meeting manufacturer/TMC guidelines may be used to secure landing gear components. Welded components must be attached following the original manufacturers specifications.

• Examples of normal wear and tear include minor dents or bends in sand shoes or in the handle that do not call for part replacement.

• Examples of customer damage include cracked, bent, broken, or missing components caused by impact, dropping the trailer, or failure to raise the landing gear when moving the trailer. This includes stripped gears caused by dropping the trailer.

## SECTION 4.H: FRAME & UNDERCARRIAGE. *Frame*

- Do not repair minor dents in the doorframe or rear header if the doors still seal. Dents that prevent the doors from sealing may be repaired by filling with weld material or by straightening the bent member if there are no cracks in it.
- Do not try to section a doorframe upright or header. If the member cannot be repaired as above, then replace the entire piece.
- Repair any doorframe with cracked corners by re-squaring the frame, and then rewelding and installing a reinforcement angle.
- Do not re-square a doorframe unless the doors don't seal or the frame's corners are cracked.
- Square and reinforce doorframe corners if the frame is sufficiently out of square to prevent proper operation of the assembly.
- Examples of normal wear and tear include gradual wear out of rubber dock bumpers.
- Examples of customer damage include improper repairs. Major dents or cracks in the rear frame or component pieces, or shifts of the entire assembly due to impact with trees, docks, dock locks, or other obstructions or devices are also customer damage.

## SECTION 5.A: GENERAL. *Preventive Maintenance / Cosmetizing / Decals*

### **Cosmetizing**

- Remove customer decals, unit numbers, and hazardous materials placards at time of unit turn in. Inside and out
- Remove glue when removing any decal.
- Remove, decal over, or paint over any Lessee decals or markings on acquisition units that would indicate ownership other than GE. Intact TLC or Paragon logos do not need to be removed.
- Remove all GE markings from units when sold. Do not attempt to remove large GE logos. Instead, paint over these logos. Large logo decals may be removed instead of painted over if the customer is willing to pay the additional cost.
- Replace missing conspicuity/reflective tape where necessary.
- Examples of normal wear and tear include a simple trailer sweep out, removal of a few nails (less than 5) and removal of customer decals (including glue) less than 4 sq. ft. in size or that do not require special tools such as scrapers and heat guns for removal.
- Examples of customer damage include any internal trailer cleaning beyond a simple sweep out, removal of external graffiti, or removal of large customer decals or decals that require special tools such as heat guns.

### **PMI / FHWA**

- Pull one hubcap (sealed grease hubs only) during every PMI or FHWA and inspect lubrication condition. If lubrication level is low check remaining wheel ends.
- Do not perform another PMI (PM or FHWA) until at least 75% (3/4) of the maintenance interval has passed since the last PMI.
- Use only approved GE forms for PMI or FHWA.
- Remove all old PMI (PM or FHWA) decals.

## SECTION 6.A: REEFER UNIT

- A certified mechanic or vendor should perform PM/Service every 1,500 running hours or six months whichever comes first.
- It is customer's responsibility to make sure reefer unit receives preventive maintenance servicing as outlined above.
- A certified mechanic or vendor must perform all reefer unit repairs if refrigeration will be handled and a refrigeration re-claiming machine must be utilized.
- Reefer unit must have a pre-trip completed and be cycled during every PMI.
- A 90-day PM and Annual Service should be completed during every PMI.
- All parts, switches, gauges, and accessories should be in place and operable at time of turn in.
- The engine must be cold started (without jumpstarting) and run in auto start/stop and continuous modes.
- The unit must operate in high-speed cool and low speed heat, cool, and defrost.
- Check for oil and coolant leaks. Engine oil and coolant should be at the recommended levels.
- If damage is noted to reefer exterior check for damage to condenser, evaporator, engine, compressor, and all other reefer unit components.
- Check belts and hoses for damage from tree limbs or other overhanging objects
- Customer must provide documentation of all maintenance work performed on the unit while on rent.

### FOR LTL AND LONG TERM RENTAL

- Unless otherwise specified in a contract customer must make the reefer unit available every 1500 hours or six months (whichever comes first) for PMI/Service.
- Unless otherwise specified in a contract, customer will at their own expense make the unit available to an authorized manufacturer's facility to perform a documented 4,500-hour inspection. 4500 hour inspection must be completed at a GE or authorized manufacturers facility. Customers are specifically not authorized to perform the 4500 hour inspection. Customer will be responsible for all expenses of the inspection, expenses resulting from the inspection, as well as any cartage expenses incurred to and from the inspector's location.
- If Customer fails to comply with GE PM requirements, customer will be responsible for any and all expenses incurred during "breakdowns".
- At time of turn in or termination engine must have a minimum 235 lb. of compression per cylinder. Compressor must pull suction per reefer manufacturer's operating manual at ambient temperatures of up to 100 degrees. Customer must provide documentation of all maintenance work performed on the unit while on LTL or Long Term Rental.

- Examples of normal wear and tear include scheduled maintenance.

- Examples of customer damage include damage to doors, door hardware, switches, gauges, or reefer frame, engine failure due to lack of oil or water, or improper maintenance. Failure to comply with GE PM requirements in this document or by contract.

## SECTION 7.A: RUNNING GEAR. ABS

- ABS system should be checked for cut, spliced, unplugged, or damaged wiring, warning light, ECU, or other signs of tampering or damage.

- Examples of customer damage include cut or spliced electrical lines, disconnected valves, dismantled ECU's, and/or complete ABS removal.

- Examples of normal wear and tear include non-responsive ECU's and valves. Otherwise, ABS components do not generally wear out.

## SECTION 7.B: AIR SYSTEM. Glad Hands / Airlines / Chambers / Valves / Reservoirs

- Do not replace airlines for dry rot unless cracked.
- Do not replace airlines for rubbing unless worn enough to expose the first row of fiber cords.
- Replace glad hand seals if cracked, missing or damaged.
- Do not rebuild valves except for replacing plug kits.
- **Do not repair brake chambers. Replace only.**
- Do not replace rusted steel brake chambers unless leaking, spring is visible, or otherwise not working.
- Replace corroded aluminum brake chambers if corrosion is excessive. (Basically if corrosion covers the entire mounting surface, or the chamber shows other signs of weakening.)
- Do not replace an air reservoir unless leaking.
- Do not weld on air reservoirs.

- Examples of normal wear and tear include dry rot on airlines, abrasion from rubbing airlines, or glad hand seal replacement. Otherwise, air system components do not generally wear out.

- Examples of customer damage include improper repairs such as using inferior materials or improper bypass repairs and/or damaged or missing components such as glad hands, valves, brake chambers, or airlines. Brake chambers or other components damaged by road debris fall into this category. Pouring anti-freeze or other liquids into the air system can cause valve and brake system failure; any damages resulting from such failures, will be considered customer damage.

## SECTION 7.C: RUNNING GEAR. Axles and Hubs / Bearings / Wheel Seals

### Axle

- Do not repair bent or cracked axles, or gouged spindles. Do not use "axle doctor" type services.
- Replace axles that are bent or cracked or that have gouged spindles.
- Do not check alignment unless requested by customer or the trailer shows signs of unusual tire wear. Do not realign unless more than 1/4" out of alignment (kingpin-spindle, or spindle-spindle measurements on either side differ by more than 1/4").
- Do not attempt to align a loaded trailer.
- Do not check for a bent axle unless axles cannot be brought into alignment, unless there is evidence of wheel end damage, or unless there is some other clear indication of a bent axle.
- Do not replace bent axles unless measurements differ by more than 1/4". See Tech Aid Manual for measurement method.

### Bearings

- Trailers equipped with sealed grease hubs that have more than 100,000 miles or are three years old or older and their repair history indicates that the wheel end has not be removed or inspected during the life of the trailer should have one hubcap removed and the lubrication level and condition checked. If lubrication level is low, water is present, or grease has hardened, remove and inspect the outer bearing. Inspect other wheel ends if lubrication level is low, water is present, or grease has hardened. If water is present or grease has hardened clean and repack bearing.
- Do not replace bearings and races unless pitted or flaking. Pits or flakes can be felt using your fingers.
- Do not replace bearings and races for minor discoloration.
- Replace bearings and races as a set on a wheel end requiring bearing replacement.

### Wheel Seal

- A hubcap or wheel seal is considered leaking if leaking enough to form a droplet or pool of oil or grease. Minor seepage that does not form drops is not a leak. Old run marks should not be considered a leak unless lube level is very low.
- Pull one hubcap (sealed grease hubs only) during every PMI or FHWA and inspect lubrication condition. If lubrication level is low check remaining wheel ends.
- Do not replace hubcaps or wheel seals unless leaking as described above.
- Replace any hubcap that has a sight glass that is discolored or distorted in a manner to prohibit inspection of oil level.
- Never try to reuse a wheel seal. Always replace the seal when a hub is pulled (i.e., when doing a brake job on a unit with inboard mounted drums).

Examples of normal wear and tear include replacement of wheel seals on outboard mounted drum wheel ends after a reasonable period. Bearings and other non-brake wheel end components are not wear out components.

Examples of customer damage include components cracked or broken by impact damage or leaking seals caused by inappropriate equipment usage, such as submerging axles in water or other extreme usages. If a unit is on extended rental or lease and the customer performs no preventive maintenance nor makes the unit available for GE maintenance, and as a result of poor wheel end lubrication an axle "burns up", this will also be considered customer damage.

## SECTION 7.D: RUNNING GEAR. Brakes

### Linings

- Do not replace brake shoes until worn below 2.5/8ths (10/32nds).
- Replace any brake shoes with cracked linings (warranty).
- If one side of an axle requires new shoes, do not reline the other side if it still has 4/8ths (16/32nds) or more lining.
- US and Mexico based trailers may only use these linings:
  - Carlisle MB20
- Canada based trailers may only use these linings:
  - Abex 685.
- 1999 and newer trailers with Rockwell or Meritor axles should be relined with "Q plus" shoes. Verify "Q plus" marking on cam head.
- Do not replace "Q plus" shoes with a "Q" shoes unless "Q plus"
- Do not replace drums at time of brake reline unless they meet the criteria below.
- Replace brake drums if heat checks or cracks are more than 1/32" deep or extend unbroken across the entire braking surface of the drum.
- Replace drums if wear causes the internal drum diameter to be more than .120" over the original dimension, or if rivet grooves differ from the rest of the drum surface by .060" or more.
- Do not "turn" drums or use drums that have been "turned".
- Replacement drums must weigh at least 107 lbs.
- Slack adjusters on an axle must be the same size and type.

- Do not rebush s-cams unless cam movement at the "s" side exceeds .080.
- Do not rebush slack adjuster side bushing unless "s" side bushing meets replacement criteria.
- Do not replace anchor pins when doing a brake reline unless noticeably worn or grooved.
- Always replace springs and rollers when relining brakes.

Examples of normal wear and tear include normal life wear out of parts such as brake linings, drums, and bushings.

Examples of customer damage include but are not limited to excessive brake wear or brake "burn-up" as a result of improper braking or damage to slack adjusters, shoes or drums caused by improper or inadequate customer maintenance or hitting road debris or other objects. Excessive brake wear will be recognized when a unit gets less than 10,000 miles per 1/8" of brake lining.

## SECTION 7.E: ELECTRICAL. *Repair Specification*

- Shrink tube (wrap) is the preferred method for electrical wiring repair.
- Do not rework other apparently improper lighting repairs if lights are functioning properly and there are no external signs of corrosion.
- One repair is permitted in the front and rear sections of the main 7-way cable.
- Replace lights with cracked covers or that are filled with water.
- Do not replace a 7-way because it is missing a cover. Replace the cover only.
- Replace the 7-way if the body of the connector is cracked
- Do not circuit test wires except at existing connectors and lights, unless absolutely necessary. Reseal any probe locations with liquid sealant or silicon.

- Examples of normal wear and tear include non-LED bulb replacement near the end of a trailer's useful OTR life.

- Examples of customer damage include improper repairs such as splices insulated only with electrical tape, widespread wire corrosion as a result of midline wire probing through the wire insulation, or multiple wire splices. Impact damages that crack lens covers or otherwise damage brackets, bulbs, or wiring as well as missing or stolen lights, covers, brackets, or reflectors are also customer damage.

## SECTION 7.F: RUNNING GEAR. *Subframe*

- Replace slider rail if cracks around pinholes are greater than 1/2" long. Cracks less than 1/2" can be repaired by welding and plating.
- The minimum length to section a slider rail is 10'.
- Do not weld on or repair cracked spring hangers. Replace only.

- There are no examples of normal wear and tear on subframes. Subframes are not wear out components.

- Examples of customer damage include improper repairs or bent or cracked components due to impact, trailer overloading, or driver failure to ensure subframe pins were properly engaged.

## SECTION 7.G: RUNNING GEAR. *Air Ride Suspension*

- Do not replace air springs for wear from rubbing airlines unless worn enough to expose the first rows of cords in the rubber.
- Do not replace shock absorbers unless leaking so that the shock is completely wet down to the mounting bracket.
- Replace shock absorbers if movement exceeds 1/8" and cannot be reduced by simply tightening mounting bolts.

- Examples of normal wear and tear include replacement of leaking shock absorbers, adjustment of air ride height, and replacement of air springs due to gradual wear from rubbing airlines.

- Examples of customer damage include punctured or cut air bags or supports, arms, or other components damaged by impact or trailer overloading.

## SECTION 7.H: RUNNING GEAR. *Leaf Spring Suspension*

- Do not retorque u-bolt unless they show signs of movement.
- Do not replace equalizers unless worn to allow 1/8" of movement.
- Do not tighten torque arms unless side-side movement exceeds 1/8". Do not replace for side-side movement. Replace torque arms if up-down or front-back movement exceeds 1/16".
- Do not replace leaf springs for "losing their arch" unless they show obvious signs of bottoming out on the spring stops.
- Do not repair cracked suspension components. Replace only.

- Examples of normal wear and tear include replacement of radius rods or equalizers due to gradual bushing wear. Most suspension components, including springs, are not wear out items.

- Examples of customer damage include broken leaf springs or supports, arms, or other components damaged by impact or trailer overloading.

## SECTION 7.I: RUNNING GEAR. *Tires*

- Tire pressures should be checked on every PM, outbound and inbound inspection.
  - Only EHS approved and trained GE mechanics are authorized to repair tires; otherwise, an approved tire vendor must repair tire.
  - On the road "flat repairs" may be performed for EBS needs only.
  - Do not replace tires until worn below 4/32nds.
  - Rematch tires if tread depths differ by more than 4/32nds.
  - Replace tires with sidewall bulges greater than 3/8", or with ozone cracking deeper than 1/32nd.
  - Replace tires with any sidewall or tread damage that exposes steel cables, even if the tire is still holding pressure.
  - Replace tires if 2 sq in. or more of the tread has been "chunked out".
  - Other minor tire damage that do not expose cables do not require tire change out or repair.
  - Do not inflate a radial tire with a pressure below 75 psi. Do not inflate a bias ply tire with a pressure below 65 psi. In both cases, treat the tire as flat and have it sent to the capper for inspection.
  - Do not use retreads on the front axle of spread axle trailers or in any position on tri-axle, or more than 3 axle trailers.
  - Do not use retreads on dropdeck flatbeds, space vans, lowboy, or similar unit.
  - Do not mix radial and bias ply tires of the same axle.
  - Replace lug-type tires at time of PMI.
  - Do not inflate or deflate tires with a pressure between 95 and 105 psi for radial tires and 80-85 psi for bias ply tires. If over, deflate radials to 100 psi and bias to 85 psi. If under, inflate radials to 100 psi and bias ply to 85 psi.
  - Tires must be capped using a GE Corporate Maintenance Department approved recapper and tread pattern.
- Casing Specs & Repairs**
- Do not recap any casing older than 7 years. Do not recap a casing more than 2 times.
  - Do not recap a casing with or requiring more than 1 section repair, or 4 total repairs, including nail hole or rubber spot repairs. Any repair larger than 3/8" in diameter and involving steel belts is considered a section repair.
  - Sidewall section repairs must be smaller than 3/4" wide or 2" long. Tread area sections may not be larger than 1". No bead area repairs are permitted. Casings not meeting these specs should be sold.
- Do not section repair bias ply tires. Only nail hole and rubber spot repairs are permitted.
  - Purchased casings must be less than 5 years old, must not have been capped before, and may have only 1 repair 3/8" in diameter or smaller.
  - The following are acceptable casings:
 

General	Bridgestone	Goodyear
Yokohama	Continental	Kelley Springfield
Firestone	Michelin	Dunlop
Cooper		
  - Other brand name tires are to be removed at time of unit turn in and either returned to the customer or sold.
  - If a tire that has 9/32nds or more tread remaining requires repair, do not have the tire recapped. If the tire has 6/32nds or less tread remaining and requires repair, have the tire recapped.

• Normal wear and tear includes tire replacement due to normal life tread wear, and minor tread or sidewall damage not requiring repair.

• Examples of customer damage include excessive wear, irregular wear, tire damage, flat tires, and inferior quality tires. Flat tires include those caused by minor damage like nail holes, as well as blowouts caused by road debris, curbing tires, or improper inflation. Cuts bulges and "chucks" taken out of the tread by such things are also customer damage. Excessive or irregular wear is any wear that causes a tire to have a tread life of less than 10,000 miles per 1/32nd of tread. Returning a unit to GE with tires that are clearly inferior to those that were on the unit at time of rent or lease (such as replacing radial tires with bias ply) is also customer damage, and the customer may be billed for the difference in tire value. For flat tires, GE will recover from the customer any lost tread life. Additionally, when GE cannot recover the tire casing, either because the casing is not repairable or because the customer did not return the casing (i.e., as a result of an EBS call), GE will charge the customer for the value of the casing in addition to the lost tread life. GE may also charge for the cost of the casing when a customer runs tires below 2/32nds of tread or when tires have been run under inflated causing casing structure damage.

## SECTION 7.J: RUNNING GEAR. *Wheels*

- Replace any cracked wheels or rims.
- Replace any wheel or rim that the flange is bent or distorted enough to cause the bead to sit improperly.
- Welded wheels or rims are not acceptable.
- Do not heat or straighten wheels or rims.
- Replace any rim that has a distortion or enlargement of the ball seat or bolt hole.
- Replace any wheel or rim that the bolt hole ball seat is worn to 1/16<sup>th</sup> or less. (The approximate thickness of a dime.)
- Replace any wheel or rim that has excessive wear or corrosion.

• There are no examples of normal wear and tear to wheels. These are not wear out components.

• Examples of customer damage include components cracked or broken by impact or overloading.